REMARKS

Applicants have rewritten claim 4 in independent form to incorporate the features of claim 1.

Applicants have rewritten claim 1 to incorporate the features of claim 8, and Applicants have canceled claim 8.

New claims 53-62 have been added.

The Examiner rejected claims 1, 2, 7-13, 17-19 and 20-23, 51 and 52 under 35 U.S.C. §102(e) as being anticipated by Asai et al. (US 6,384,344).

The Examiner rejected claims 3-6 under 35 U.S.C. §103(a) as allegedly being unpatentable over Asai in combination with Kinoshita (US 6,294,744).

The Examiner rejected claim 14 under 35 U.S.C. §103(a) as allegedly being unpatentable over Asai as applied to claim 1 in combination with Applicant's Admitted Prior Art (APA).

The Examiner rejected claims 15 and 16 under 35 U.S.C. §103(a) as allegedly being unpatentable over Asai and APA as applied to claim 14 and further in combination with Bhatt.

The Examiner rejected claims 24 and 25 under 35 U.S.C. §103(a) as allegedly being unpatentable over Asai as applied to claim 22 and further in combination with Bhatt et al. (US RE37840E).

Applicants respectfully traverse the §102(e) and §103(a) rejections with the following arguments.

35 U.S.C. §102(e)

The Examiner rejected claims 1, 2, 7-13, 17-19 and 20-23, 51 and 52 under 35 U.S.C. §102(e) as allegedly being anticipated by Asai et al. (US 6,384,344).

Applicants respectfully contend that Asia does not anticipate claim 1, because Asai does not teach each and every feature of claim 1. For example, Asai does not teach the feature: "wherein the N dielectric layers each include a dielectric material having a stiffness of at least about 700,000 psi".

The Examiner alleges that Asai teaches "that the dielectric layers comprise a polyimide (Col. 5, Lines 43-45) that provide an inherent stiffness of at least 700,000psi".

In response, Applicants acknowledge that some polyimides have a stiffness of at least 700,000psi. Applicants respectfully contend, however, that a stiffness of at least 700,000psi is not an inherent property of a polyimide. For support, see Table 1 below which lists several polyimides having a stiffness less than 700,000psi.

Table 1.

Polyimide Material	Stiffness (psi)	Reference
Kapton®	375,000 - 470,000	http://www.dupont.com/kapton/products/H-38489-1.html
polyimide tubing	20,000	http://www.ashburrell.com/web/hvt_site/Polyimid.html
Kapton® HN film FLEX-I-MID® 3121 Cast Polyimide Kapton® KN film	400,000 570,000 630,000	http://www.rogers-corp.com/cmu/pdf/proprty1.pdf

Based on the preceding arguments, Applicants respectfully maintain that Asia does not inherently teach that the dielectric material of claim 1 has a stiffness of at least 700,000 psi as

alleged by the Examiner. Accordingly, Applicants respectfully contend that Asai does not anticipate claim 1, and that claim 1 is in condition for allowance. Since claims 2-3, 7, 9-25, and 51-52 depend from claim 1, Applicants contend that claims 2-3, 7, 9-25, and 51-52 are likewise in condition for allowance.

35 U.S.C. §103(a)

The Examiner rejected claims 3-6 under 35 U.S.C. §103(a) as allegedly being unpatentable over Asai in combination with Kinoshita (US 6,294,744).

As to claim 3, Applicants respectively assert that claim 3 is not unpatentable over Asai in view of Kinoshita under 35 U.S.C. §103(a), in light of the dependence of claim 3 on claim 1 and Applicants have argued *supra* that claim 1 is not anticipated by Asai under 35 U.S.C. §102(e).

As to claim 4, Applicants respectfully contend that claim 4 is not unpatentable over Asai in view of Kinoshita, because Asai in view of Kinoshita does not teach or suggest each and every feature of claim 4. For example, that claim 4 is not unpatentable over Asai in view of Kinoshita, because Asai does not teach or suggest the feature: "wherein the at least one microvia includes a first microvia, wherein the first microvia passes through dielectric layers M through N, wherein M is at least 2, wherein N is at least 3, wherein M is less than N, and wherein metal plane N is electrically coupled to the first microvia".

The Examiner admits that Asai does not teach or suggest the preceding feature of claim 4. The Examiner alleges that Kinoshita teaches the preceding feature of claim 4. The Examiner argues: "It would have been obvious to one of ordinary skill in the art to incorporate at least one microvia structure, which includes a first microvia that passes through dielectric layers M [2] through N [3] (8b) of Asai wherein metal plane N is electrically coupled to the first microvia and a second microvia that passes through a dielectric layers I through ---1 [1] wherein metal plane N is electrically coupled to the first microvia **in order to enable electrical connection of the outer**

pattern as taught by Kinoshita (Col.9, Lines 27-34)" (emphasis added).

In response to the preceding argument by the Examiner, Applicants respectfully contend that the Examiner's argument is not persuasive, because Kinoshita's outer pattern 17, as shown in FIG. 5 of Kinoshita, is already enabled by Asai's disclosure. Indeed, Kinoshita's outer pattern 17 is analogous to Asai's upper conductor layer 9b in FIG. 1 of Asai, and an inspection of FIG. 1 of Asai shows that a connection is enabled between the outer conductor layer 9b and the lower conductor layer 9a, the conductor layer 3, the conductor layer 4, etc. Thus, it would not be obvious to one of ordinary skill in the art to utilize Kinoshita's first microvia in order to enable electrical connection of Asai's upper pattern 9b which is fully enabled without Kinoshita's first microvia.

Based on the preceding arguments, Applicants respectfully maintain that claim 4 is not unpatentable over Asai in view of Kinoshita, and that claim 4 is in condition for allowance. Since claims 5-6 depend from claim 4, Applicants contend that claims 5-6 are likewise in condition for allowance.

As to claims 14-16 and 24-25, the Examiner rejected claims 14-6 and 24-25 under 35 U.S.C. §103(a). Since claims 14-16 and 24-25 depend from claim 1, which Applicants have argued *supra* to be patentable under 35 U.S.C. §102, Applicants maintain that claims 14-16 and 24-25 are not unpatentable under 35 U.S.C. §103(a).

CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below.

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Jack P. Friedman
Registration No. 44,688

Schmeiser, Olsen & Watts
3 Lear Jet Lane, Suite 201
Latham, New York 12110
(518) 220-1850